

HFC Emission Reductions

Comments on California ARB Revised Proposed Strategy for Short-Lived Climate Pollutants (SLCPs)
January 17, 2017

EOS Climate was founded in 2008 to prevent emissions of fluorocarbon refrigerants through market-based incentives. Our comments here are focused on ARB's proposed emission reduction measures for HFCs.

We originated the GHG protocol for destruction of ozone-depleting substances adopted by California Air Resources Board (ARB) for AB 32. To date, our projects around the U.S. have prevented emissions equal to more than 5.6 million tons of CO₂ while accelerating the transition to more advanced refrigeration and air conditioning technologies.

Building on this success, we are working with leading companies focused on reducing HFC emissions, as well as natural gas producers and others in the natural gas value chain to incentivize production of natural gas that minimizes methane leakage.

In addition to the HFC emission reduction measures in the SLCP proposed Strategy (sales and use prohibitions, funding early adoption of low-GWP refrigeration), ARB should consider expanding the Cap-and-Trade program to include additional offset protocols that create market-based incentives to reduce HFC emissions. The American Carbon Registry has approved two methodologies to reduce HFC emissions, both of which would stimulate investments in advanced technologies and meet ARB's objectives:

- Emission Reduction Measurement and Monitoring Methodology for Use of Certified Reclaimed HFC Refrigerants and Advanced Refrigeration Systems ("HFC Refrigerant Methodology")
- Emission Reduction Measurement and Monitoring Methodology for the Transition to Advanced Formulation Blowing Agents in Manufacturing and Use ("HFC Foam Methodology")

These methodologies share common features:

- Both conform to ISO GHG standards and ARB's fundamental regulatory requirements including explicit tests for additionality, regulatory compliance demonstrations, real and permanent GHG reductions, and verifiability by certified 3rd parties.

- Both incorporate the most current data and relevant technical inputs from the U.S. EPA, the IPCC, Montreal Protocol Technology and Assessment Panel, and ARB.
- Both underwent extensive public and peer review, which included experts from the U.S. EPA and ARB
- Both complement ARB's proposed HFC emission reduction measures and enable credits for businesses to deploy alternatives and advanced technologies that go beyond business-as-usual, ahead of the Montreal Protocol and U.S. EPA SNAP schedules
 - The HFC Refrigerant Methodology enables credits for installation of low-GWP commercial refrigeration systems – the same types of systems that ARB is proposing to receive State funds. However, rather than rely on public subsidies, ARB's adoption of the methodology would leverage carbon finance, with stringent monitoring and verification regulatory assurances.
 - The HFC Foam Methodology enables credits for deployment of low-GWP alternatives to manufacture insulation foam products, several years in advance of EPA SNAP prohibitions
 - The HFC Refrigerant Methodology also enables credits from reclamation and re-use of HFC refrigerants which would magnify the impacts of ARB's existing Refrigerant Management Program and the SLCP Strategy's proposed prohibition on sales of very high-GWP refrigerants. Increasing HFC refrigerant reclamation and re-use displaces production of new (virgin) HFC refrigerants and thereby prevents emissions that would otherwise occur from the additional supplies of HFC refrigerants.

ARB demonstrated leadership in including ODS destruction offsets that has prevented the equivalent of over 12 million tons of CO₂ and creating a robust market-incentive for powerful greenhouse gases that neither the Montreal Protocol nor U.S. EPA regulations could address. These new methodologies now provide ARB with a similar opportunity to significantly accelerate HFC emission reductions across multiple sectors, within California and across the United States, while further strengthening the Board's existing and future programs.

Jeff Cohen
EOS Climate
San Francisco, CA